

et al in view of U.S. Patent No. 5,189,673 to Burton et al. Applicants respectfully traverse the rejection of these claims for the reasons set forth below.

A. CLAIMS 1 AND 18

Claims 1 and 18 are directed to an information processing apparatus and method in which error detection or correction encoding is performed on at least a portion in a header (in information to be distributed) with higher redundancy than an entity in the information to be distributed. The information to be distributed encoded by said encoding means is multiplexed in a broadcast signal, and the multiplexed signal is transmitted.

On the contrary, Murakami, as relied upon by the Examiner, simply shows in Fig. 7 that a video frame 160 is subdivided (167) from an arbitrary position thereof in a unit of the video data packet 132 and then the unique code word F_s 162 is added as the first item to the video data frame 160 for transmission. See Murakami, Fig. 7, col. 9, lines 15-21 (Office Action, page 3). Murakami is simply silent as to any error detection or correction encoding being performed on at least a portion in a header with higher redundancy than an entity in the information to be distributed.

Accordingly, claims 1 and 18 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

B. CLAIMS 8 AND 19

Similarly, claim 8 and 19 is directed to an information processing apparatus and method in which the information to be distributed is multiplexed in a broadcast signal and the multiplexed signal is transmitted. A portion of a header in the information to be distributed is transmitted at least a plurality of number of times while an entity in the information to be distributed is transmitted.

For similar reasons as discussed above for claims 1 and 18, claims 9 and 19 and their dependent claims are also believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

C. CLAIMS 12 AND 20

Claims 12 and 20 are directed to an information processing apparatus and method in which the information to be distributed encoded by said encoding means is multiplexed in a broadcast signal, and the multiplexed signal is transmitted. A plurality of kinds of information are able to be transmitted as an entity in the information to be distributed, and different error detection or correction ability are used in correspondence to the kinds of information.

On the contrary, Murakami simply shows an error correction encoder 102 for effecting, for example, the (640,620,5) shortened BCH encoding on the encoded output delivered from the motion video encoder 101. See Murakami, Fig. 1, col. 5, lines 34-36. That is, Murakami simply shows error correction encoding for one kind of information, e.g., motion video. Thus, Murakami does not disclose or suggest different

error detection or correction ability being used in correspondence to the kinds of information.

Accordingly, claims 12 and 20 and their dependent claims therefrom are believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

D. CLAIMS 15 AND 21

Claims 15 and 21 are directed to an information processing apparatus and method in which the information to be distributed is multiplexed in a broadcast signal and the multiplexed signal is transmitted. The information to be distributed is transmitted as an entity in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal, and in which the data format forms an error correction code and a header of the information to be distributed forms an error correction code that is different from the error correction code formed from the data format.

As acknowledged by the Examiner, Murakami does not disclose or suggest transmission of information to be distributed in a data format used for multiplexing another information in a description format (not used in the multimedia network) in an FM audio signal.

Burton does not remedy the above-noted deficiencies in the Murakami teachings. For example, Burton simply discusses implementation of frequency division multiplexing of a narrowband telephone service and control signals with FM channels for video distribution. These frequency division multiplexed signals are summed electrically

and are modulated onto an optical carrier having a wavelength of approximately 1310nm. See Burton, col. 3, lines 10-16 (Office Action Page 5). Burton is silent as to multiplexing of information in an FM audio format. Accordingly, Burton does not disclose or suggest information being transmitted as an entity in a data format used for multiplexing another information in a description format that is not used in a multimedia network. Burton also does not disclose or suggest such information being transmitted as an entity in a data format used for multiplexing another information in a description format in an FM audio format.

Thus, claims 15 and 21 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

E. CLAIMS 22 AND 38

Claims 22 and 38 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format used in a multimedia network and an error correction or detection check code added for at least partial information of the information to be distributed, as an entity of a data format which is used for multiplexing predetermined information in an FM audio signal and includes an error correction check code. Error correction or detection processing of the information to be distributed is performed using the error correction or detection check code. The processing is executed based on the error correction check code and based on the error correction or detection check code at different timings.

As discussed above for claims 15 and 21, neither Murakami nor Burton discloses or suggests multiplexing information in an FM audio format.

As to the processing based on error correction or detection check code at "different timings," the Examiner relies on col. 6, lines 64-66 of Murakami. However, Murakami, as relied upon by the Examiner, discusses an operation on the transmission side in which an external digital data 106 takes about several minutes for a communication thereof when considering the data of a facsimile, a personal computer, and the like. In other words, Murakami simply notes that it takes several minutes for data communication to take place with external devices, such as a facsimile, a personal computer, etc, and that the data from such devices are then multiplexed for transmission. Murakami is clearly silent as to, at the reception side, processing being executed (1) based on the error correction check code and (2) based on the error correction or detection check code at different timings.

Thus, claims 22 and 38 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

F. CLAIMS 30 AND 39

Claims 30 and 39 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing predetermined information in an FM audio signal. The information to be distributed is stored, and it is informed that

the received information to be distributed is stored in said storage means and has not been output to an external device.

As discussed above for claims 15 and 21, neither Murakami nor Burton discloses or suggests multiplexing information in an FM audio format.

As to the storing and informing limitations, the Examiner relies on col. 6, lines 46-52 of Murakami. However, Murakami, as relied upon by the Examiner, relates to transmission-side and simply discusses:

Next, the operation of the configuration will be described. In Fig. 1, the encoded output delivered from the motion video encoder [10] 101 is smoothed with respect to the speed by means of the buffer memory, the unique code word F_s 162 indicating the top of the [motion] video frame and the flag F_f 133 are added thereto, and then the obtained data is sent to the error correction encoding section 102 in a unit of the [motion] video data packet 132.

Clearly, Murakami does not disclose or suggest any storing of information to be distributed received in the multiplexed broadcast signal, or any informing thereof.

Thus, claims 30 and 39 and their dependent claims are believed to be patentably distinguishable over the cited reference. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

G. CLAIMS 32 AND 40

Claims 32 and 40 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing first character information in an FM audio signal. The first character information is displayed, and the second

character information is displayed when the information to be distributed has the second character information.

As discussed above for claims 15 and 21, neither Murakami nor Burton discloses or suggests multiplexing information in an FM audio format. Also, as discussed above for claims 30 and 39, neither Murakami nor Burton discloses or suggests the storing of information to be distributed received in the multiplexed broadcast signal. The remaining reference DeMont does not remedy the above-noted deficiencies in the Murakami teachings.

Furthermore, the Examiner acknowledges that Murakami and Burton does not disclose or suggest the claimed display of the first character information and the second character information from a received multiplexed broadcast signal, but believes that the display limitation is taught by DeMont (i.e., Fig. 5, col. 4, lines 27-39). However, DeMont simply shows modulation of a case of HTML tag characters of an electronic document to hide a message therein, and an example of which is shown by reference to Fig. 7 through an HTML browser. Figs. 5 and 7 are merely provided to show that tag characters can be modulated to hide a message. DeMont is silent as to the operation of displaying character information in a received broadcast signal, and the ability to display two character information, i.e., display a first character information and display a second character information when the information has the second character information.

Thus, claims 32 and 40 and their dependent claims are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

H. CLAIMS 35 AND 41

Claims 35 and 41 are directed to an information processing apparatus and method in which a broadcast signal is received. The broadcast signal is obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing character information in an FM audio signal. The information to be distributed is stored. A command is executable for displaying the stored information, and a command is executable for outputting the stored information to an external device, at different timings.

As discussed above for claims 15 and 21, neither Murakami nor Burton discloses or suggests multiplexing information in an FM audio format. Also, as discussed above for claims 32 and 40, none of the references discloses or suggests the claimed storing and displaying of such stored information.

Furthermore, as noted above, claims 35 and 41 further recite an executable command for outputting the stored information to an external device, at different timings. The Examiner has not specifically indicated where such a limitation is taught in the cited references, and it is believed that the cited references are silent as to such limitation.

Thus, claims 35 and 41 are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

I. CLAIMS 42 AND 48

Claims 42 and 48 are directed to an information processing apparatus and method involving a) inputting information data, and a check code for correcting an error of the information data; b) detection means for detecting an error state of the information data; c) setting an allowable error state of the information data; and d) controlling processing for the information data input by said input means in accordance with outputs from said setting means and said detection means.

On the contrary, Murakami, as relied upon by the Examiner, simply shows error correction encoding of an encoded video signal to be transmitted. See Murakami, col. 6, line 52 to col. 7, lines 22. That is, Murakami is error correction encoding a signal to be transmitted, not processing received or inputted information data by detecting an error state of the information data, setting an allowable error state of the information data and then controlling processing of such information data based on the detected error state and the set allowable error rate.

Thus, claims 42 and 48 are believed to be patentably distinguishable over the cited references. Reconsideration and withdrawal of the rejection of these claims are respectfully requested.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the objection of the Abstract and the rejection of claims 1-48 and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4503, Order No. 1232-4450. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

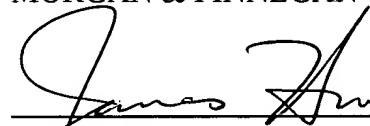
In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4503, Order No. 1232-4450. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

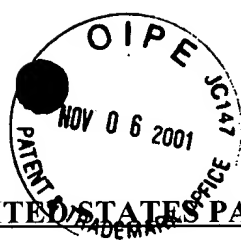
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): SUGATA et al.

Serial No.: 09/108,357

Group Art Unit: 2663

Filed: July 1, 1998

Examiner: T. NGUYEN

For: INFORMATION PROCESSING APPARATUS FOR AND METHOD
OF TRANSMITTING AND/OR RECEIVING BROADCAST SIGNAL**ATTACHMENT**

Amendments made to the abstract herein are indicated in this attachment by bracketing the text that has been deleted and underlining the text that has been added.

IN THE ABSTRACT:

Change the paragraphs on page 55 line 2 to page 56, line 13, as follows:

[There is provided an] An information processing apparatus/method[, which] employs error detection or correction to [encodes] encode information to be distributed in a description format used in a multimedia network[, and] in

which the error detection or correction encodes at least a portion in the header in the information to be distributed with higher redundancy than the entity in the information to be distributed[.]. [multiplexes the] The encoded information to be distributed in a broadcast signal is multiplexed and transmitted[, and transmits the multiplexed signal]. Alternatively, the information processing apparatus/method may involve:

[There is also provided an information processing apparatus/method, which inputs information to be distributed in a description format used in a multimedia network, multiplexes the information to be distributed in a broadcast signal, and transmits the multiplexed signal, and

which transmits] transmitting a portion of the header in the information to be distributed at least a plurality of number of times while the entity in the information to be distributed is transmitted[.]; and/or

[There is also provided an information processing apparatus/method, which error detection or correction encodes information to be distributed in a description format used in a multimedia network, multiplexes the encoded information to be distributed in a broadcast signal, and transmits the multiplexed signal, and

which can transmit] transmitting a plurality of kinds of information as an entity in the information to be distributed, and [uses] using different error detection or correction ability in correspondence with the kind of information.

[There is also provided an] The information processing apparatus/method[, which] may also involve [inputs] inputting information data, and a check code for correcting an error of the information data, [detects] detecting the error state of the information data, [sets] setting an allowable error state of the information data, and [controls] controlling processing for the input information data in accordance with results in the setting step and the detection step.

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